

## **SYSTEMS FOR MAKING BARRIER COATED PLASTIC CONTAINERS**

### **Abstract of the Disclosure**

Methods and systems are provided for making a coated plastic container, such as for packaged beverages, possessing a gas barrier and having enhanced resistance to loss in barrier due to handling abuses expansion of walls of the container. The system comprises a vacuum cell, a coating source in the vacuum cell for supplying a coating vapor to an external surface of a plastic container positioned within the vacuum cell, and gas feeds for supplying one or more process gases into an interior space of the vacuum cell. The coating source heats and evaporates an inorganic coating material, such as metal or silicon, to form a coating vapor, which is energized to form a plasma. The process gases include a carbon-containing gas, such as acetylene. The coating source is arranged within the vacuum cell such that the coating vapor and/or plasma reacts with at least one of the process gases and a thin coating is deposited and bonded on the external surface of the plastic container, such that the thin coating comprising carbon and inorganic material, such as an inorganic oxide.